

## **MATERIAL SAFETY DATA SHEET**

### **VINYL ACETATE MONOMER**

(For Synthesis)

MSDS CAS: - 108-05-4

#### **Section 1: Chemical Product and Company Identification**

##### Section 1: Chemical Product

**Product Name:** VINYL ACETATE MONOMER (For Synthesis)

**CAS#:** 108-05-4

**Synonym:** Not applicable.

**Chemical Name:** Not applicable.

**Chemical Formula:** C<sub>4</sub>H<sub>6</sub>O<sub>2</sub>

**Brand:** OXFORD

##### Details Of The Supplier Of The Safety Data Sheet:

**Company identification:** **OXFORD LAB FINE CHEM LLP**  
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#### **Section 2: Composition and Information on Ingredients**

##### Composition:

Name	CAS #	% by Weight
Vinyl acetate	108-05-4	100

##### Toxicological Data on Ingredients:

Vinyl acetate: ORAL (LD50): Acute: 2920 mg/kg [Rat]. 1613 mg/kg [Mouse]. DERMAL (LD50): Acute: 2335 mg/kg [Rabbit]. GAS (LC50): Acute: 2828.4 ppm 4 hour(s) [Rat]. VAPOR (LC50): Acute: 1550 ppm 4 hour(s) [Mouse]. 2500 ppm 4 hour(s) [Rabbit].

## Section 3: Hazards Identification

### Potential Acute Health Effects:

Very hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation (lung irritant). Hazardous in case of ingestion. Slightly hazardous in case of skin contact (permeator). Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

### Potential Chronic Health Effects:

Hazardous in case of inhalation (lung irritant). **CARCINOGENIC EFFECTS:** Classified + (PROVEN) by OSHA. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. **DEVELOPMENTAL TOXICITY:** Not available.

## Section 4: First Aid Measures

### Eye Contact:

Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used. Do not use an eye ointment. Seek medical attention.

### Skin Contact:

After contact with skin, wash immediately with plenty of water. Gently and thoroughly wash the contaminated skin with running water and non-abrasive soap. Be particularly careful to clean folds, crevices, creases and groin. Cover the irritated skin with an emollient. If irritation persists, seek medical attention. Wash contaminated clothing before reusing.

### Serious Skin Contact:

Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation: Allow the victim to rest in a well ventilated area. Seek immediate medical attention.

### Serious Inhalation:

Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

## Section 4: First Aid Measures (Continued)

### Ingestion:

Do not induce vomiting. Examine the lips and mouth to ascertain whether the tissues are damaged, a possible indication that the toxic material was ingested; the absence of such signs, however, is not conclusive. Loosen tight clothing such as a collar, tie, belt or waistband. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek immediate medical attention.

Serious Ingestion: Not available.

## Section 5: Fire and Explosion Data

**Flammability of the Product:** Flammable.

**Auto-Ignition Temperature:** 402°C (755.6°F)

**Flash Points:** CLOSED CUP: -7.8°C (18°F). OPEN CUP: 0.7°C (33.3°F) (TAG).

**Flammable Limits:** LOWER: 2.6% UPPER: 13.4%

**Products of Combustion:** These products are carbon oxides (CO, CO<sub>2</sub>).

**Fire Hazards in Presence of Various Substances:** Flammable in presence of open flames and sparks.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.

**Fire Fighting Media and Instructions:**

Flammable liquid, soluble or dispersed in water. **SMALL FIRE:** Use DRY chemical powder. **LARGE FIRE:** Use alcohol foam, water spray or fog.

**Special Remarks on Fire Hazards:** Not available.

**Special Remarks on Explosion Hazards:** Not available.

## Section 6: Accidental Release Measures

### Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

### Large Spill:

Flammable liquid. Keep away from heat. Keep away from sources of ignition. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

## Section 7: Handling and Storage

### Precautions:

Keep locked up Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe gas/fumes/ vapour/spray. In case of insufficient ventilation, wear suitable respiratory equipment If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes

### Storage:

Flammable materials should be stored in a separate safety storage cabinet or room. Keep away from heat. Keep away from sources of ignition. Keep container tightly closed. Keep in a cool, well-ventilated place. Ground all equipment containing material. A refrigerated room would be preferable for materials with a flash point lower than 37.8°C (100°F).

## Section 8: Exposure Controls/Personal Protection

### Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value. Ensure that eyewash stations and safety showers are proximal to the work-station location.

### Personal Protection:

Splash goggles. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

## Section 8: Exposure Controls/Personal Protection (Continued)

### Personal Protection in Case of a Large Spill:

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

### Exposure Limits:

TWA: 10 CEIL: 20 (ppm) TWA: 30 CEIL: 60 (mg/m<sup>3</sup>) Consult local authorities for acceptable exposure limits.

## Section 9: Physical and Chemical Properties

**Physical state and appearance:** Liquid.

**Odor:** Sweet-to-sharp

**Taste:** Not available.

**Molecular Weight:** 86.09 g/mole

**Color:** Clear Colorless to light yellow.

**pH (1% soln/water):** Not available.

**Boiling Point:** 72.2°C (162°F)

**Melting Point:** -93.2°C (-135.8°F)

**Critical Temperature:** Not available.

**Specific Gravity:** 0.9317 (Water = 1)

**Vapor Pressure:** 83 mm of Hg (@ 20°C)

**Vapor Density:** 3 (Air = 1)

**Volatility:** Not available.

**Odor Threshold:** 0.12 ppm

**Water/Oil Dist. Coeff.:** Not available.

**Ionicity (in Water):** Not available.

**Dispersion Properties:** See solubility in water.

**Solubility:** Soluble in cold water.

## Section 10: Stability and Reactivity Data

**Stability:** The product is stable.

**Instability Temperature:** Not available.

**Conditions of Instability:** Not available.

**Incompatibility with various substances:** Not available.

**Corrosivity:** Non-corrosive in presence of glass, of stainless steel (304), of stainless steel (316).

**Special Remarks on Reactivity:** Not available.

**Special Remarks on Corrosivity:** Not available.

**Polymerization:** Yes.

## Section 11: Toxicological Information

**Routes of Entry:** Eye contact. Inhalation. Ingestion.

### **Toxicity to Animals:**

**WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE.** Acute oral toxicity (LD50): 1613 mg/kg [Mouse]. Acute dermal toxicity (LD50): 2335 mg/kg [Rabbit]. Acute toxicity of the gas (LC50): 2828.4 ppm 4 hour(s) [Rat]. Acute toxicity of the vapor (LC50): 1550 ppm 4 hour(s) [Mouse].

### **Chronic Effects on Humans:**

**CARCINOGENIC EFFECTS:** Classified + (PROVEN) by OSHA. Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.

### **Other Toxic Effects on Humans:**

Very hazardous in case of skin contact (irritant), of inhalation (lung irritant). Hazardous in case of ingestion. Slightly hazardous in case of skin contact (permeator).

### **Special Remarks on Toxicity to Animals:**

Detected in maternal milk in human. Passes through the placental barrier in human. Embryotoxic and/or foetotoxic in animal. (Toluene)

**Special Remarks on Toxicity to Animals:** Not available.

**Special Remarks on Chronic Effects on Humans:** Not available.

**Special Remarks on other Toxic Effects on Humans:** Not available.

## Section 12: Ecological Information

**Ecotoxicity:** Not available.

**BOD5 and COD:** Not available.

**Products of Biodegradation:** Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

**Toxicity of the Products of Biodegradation:** The products of degradation are more toxic.

**Special Remarks on the Products of Biodegradation:** Not available.

## Section 13: Disposal Considerations

Waste Disposal:

## Section 14: Transport Information

### Land transport (ADR-RID)

**Proper shipping name:** VINYL ACETATE, STABILIZED

**UN N°:** 1301

**H.I. nr:** 339

**ADR - Class:** 3

### Sea transport (IMDG) [English only]

**Proper shipping name:** VINYL ACETATE, STABILIZED

**UN N°:** 1301

**IMO-IMDG - Class or division:** 3: Flammable liquid.

**IMO-IMDG - Packing group:** II

### Air transport (ICAO-IATA) [English only]

**Proper shipping name:** VINYL ACETATE, STABILIZED

**UN N°:** 1301

**IATA - Class or division:** 3: Flammable liquid.

**IATA - Packing group:** II

## Section 15: Other Regulatory Information

### Federal and State Regulations:

Rhode Island RTK hazardous substances: Vinyl acetate Pennsylvania RTK: Vinyl acetate Florida: Vinyl acetate Minnesota: Vinyl acetate Massachusetts RTK: Vinyl acetate Massachusetts spill list: Vinyl acetate New Jersey: Vinyl acetate TSCA 8(b) inventory: Vinyl acetate SARA 302/304/311/312 extremely hazardous substances: Vinyl acetate SARA 313 toxic chemical notification and release reporting: Vinyl acetate CERCLA: Hazardous substances.: Vinyl acetate: 5000 lbs. (2268 kg)

### Other Regulations:

OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

### Other Classifications:

#### WHMIS (Canada):

CLASS B-2: Flammable liquid with a flash point lower than 37.8°C (100°F). CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).

#### DSCL (EEC):

R11- Highly flammable. R20- Harmful by inhalation. R37/38- Irritating to respiratory system and skin. R41- Risk of serious damage to eyes. R45- May cause cancer.

#### HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 3

Reactivity: 0

Personal Protection: h

#### National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 3

Reactivity: 2

Specific hazard:

#### Protective Equipment:

Gloves. Lab coat. Vapor respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

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## **Section 16 - Additional Information**

**References:** Not available.

**Other Special Considerations:** Not available.

### ***Disclaimer:***

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